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Prospect House
George Cayley Drive
Clifton Moor
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England
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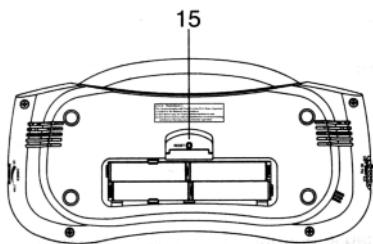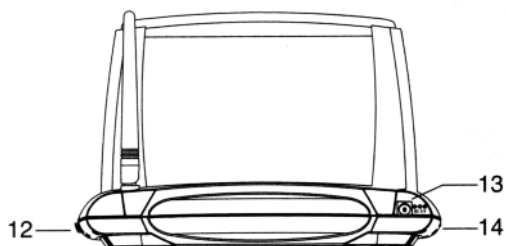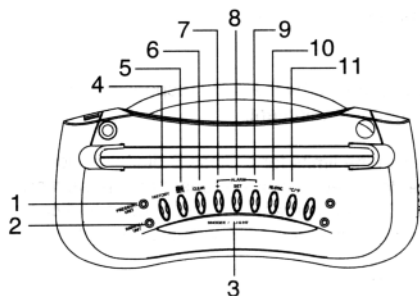Fax: +44 (0) 1904 690385

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Wireless Digital Weather Station

Code: 33405

Operating Instructions
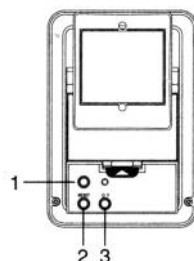
Wireless Digital Weather Station

Location of Controls
Main Unit Base

1. PRESSURE UNIT - Changes Barometric pressure units: mb/inHg/mmHg/hPa
2. RAINFALL UNIT - mm/hr or in/hr
3. SNOOZE/LIGHT - Turns off the snooze alarm for 5 minutes until the alarm is switched off
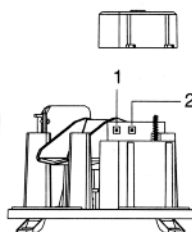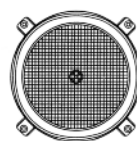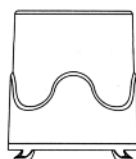
4. HISTORY - Mean pressure / Daily rainfall total / Weekly rainfall total / Monthly rainfall total / Season rainfall total
5. MAX/MIN - Maximum/minimum indoor and outdoor temperature and humidity
6. CLEAR - Clears barometric and rainfall history display
7. (+) - Use to set the clock normally
8. SET - Use to set the clock normally
9. (-) - Use to set the clock normally
10. Clock with transmitter and rain gauge
11. °C/°F - Change display of indoor temperature from celsius to fahrenheit and back
12. SNOOZE/ALARM ON/OFF - Turn off alarm or alarm with snooze function
13. ADAPTOR JACK - Plug in 7.5V adaptor jack
14. DIMMER - Dims LCD backlight
15. RESET - Resets entire clock

Wireless Temperature/Humidity Sensor (Transmitter)

1. SELECT
2. RESET
3. °C/°F

Wireless Rain Gauge

1. RESET
2. Re-sync

three seconds.
3. Dimmer switch on the base of the unit allows you to adjust the brightness of the backlight to your desired level.

°C/°F Button
Press the °C/°F button to select Celsius or Fahrenheit display.

Reset Button
Press the RESET button when either the main unit or remote transmitter unit is not operating properly.

Specifications
Temperature

Measure Range	Indoor/Outdoor (-19°C ~ 70°C) / (-2.2°F ~ 158°F)
Resolution	Indoor 0.5°C/1°F
(MAIN UNIT)	Outdoor 0.1°C/0.2°F
(OUTDOOR TRANSMITTER)	0.1°C/0.2°F

Relative Humidity

Measuring Range	Indoor 20% ~ 95%
	Outdoor 10% ~ 90%
Resolution	Indoor/Outdoor 1%

Rain Gauge

Measuring Range	0.02 inch/hour ~ 10 inch/hour (Rain rate less than 0.02 inch/hour shows 0.00 inch/hour)
Resolution	0.01 inch/hour

Barometric Pressure

Measuring Range	795mb ~ 1050mb (23.48inHg ~ 31.01inHg)
Resolution	1mb (0.03inHg)

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the

equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

Under the environment with radio frequency interference, the sample may malfunction and require user to reset the sample.

temperature/humidity are shown on the LCD.

Wireless Remote Temperature/Humidity and Rainfall Transmission

The transmission frequency is 433MHz. The outdoor transmission range is 100 feet from the main unit. Obstacles, walls, etc. will reduce the transmission range. Once the main unit is plugged in or the batteries have been installed, it will start to receive signals for ten minutes. Once batteries are placed in the remote units, it will start to transmit temperature/humidity/rainfall data to the main unit every three minutes. Upon successful reception, the remote/outdoor temperature/humidity and rainfall will be shown in the remote temperature/humidity/rainfall field on the LCD. The main unit automatically updates the remote reading at three minute intervals.

Receiver Signal Indicator Icons

The following icons indicate the signal transmission status on the LCD:

▶···	NO SIGNAL DETECTION
⟩⟨	SIGNAL DETECTION
⟨⟨	SUCCESSFUL RECEPTION

Transmission Troubleshooting

1. If the main unit does not receive signals within the first ten minutes, a blank "-" appears in the OUT TEMPERATURE/HUMIDITY or RAINFALL window on the LCD. If at any time during operation a signal is not received after five consecutive intervals, a blank "-" appears. If this happens, press the RE-SYNC button. The main unit will receive signals for ten minutes.
2. If the remote unit's batteries are running low, a low battery icon appears in the OUT TEMPERATURE/HUMIDITY or RAINFALL field. Replace the batteries.
3. If the display unexpectedly goes blank, press the RE-SYNC button on the main unit to force the main unit to receive a signal. If this does not work, check the following:
   - The AC/DC adaptor is plugged in properly to the wall and unit.
   - The remote unit is still in place.
   - The batteries in both the remote unit and the main unit are still good. Replace if necessary.
   - The remote transmitter is within range and the path is clear of obstacles or other interference (see "Interference" section). Shorten the distance if necessary.

Interference

Signals from other household devices such as

garage-entry controls, doorbells and home security systems may interfere with the temperature-data transmission and may cause temporary reception failure. This is normal and does not affect the general performance of the unit. The transmission and reception of the temperature/humidity/rainfall reading will resume once the interference has stopped.

Manual Clock Setting

1. Press and hold SET button for two seconds until a beep sounds to start clock setting. The year will display in flashing characters on the clock time portion of the LCD.
2. Press + / - buttons to adjust the year between 2004 and 2099.
3. Press SET button consecutively to proceed to Month-Date setting; Hour-Minute setting; 12 Hour/24 Hour time; Display.
4. Press and hold either + / - for fast setting.

Setting the Alarm

Press + / - button once for a beep sound, press + / - button again to set the alarm time.
Press and hold + / - for fast setting.
After setting, release + / - button, the alarm is set.

Alarm On

The beeping alarm wakes you to one minute of beeping until the alarm is turned off.
1. To select the alarm on, slide the ALM OFF/ALM ON/SNOOZE switch to ALM ON.
2. To turn off the alarm once it has sounded, press the SNOOZE/LIGHT button.

Alarm On with Snooze

The bleeping alarm with snooze wakes you to one minute of beeping that repeats every five minutes until turned off.
1. To select the beeping alarm with snooze, slide the ALM OFF/ALM ON/SNOOZE switch to SNOOZE.
2. To activate the snooze function after the alarm has sounded, you may either wait for the alarm to turn off after one minute or you may press the ALARM STOP/LIGHT button. In both instances the alarm repeats every five minutes until it is turned off.
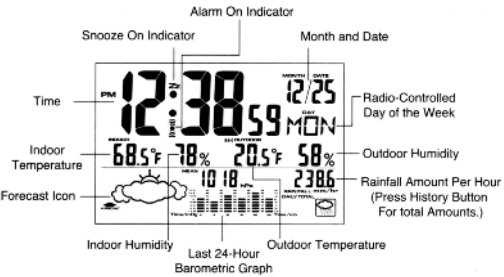
Alarm Off

To turn off the snooze alarm, slide the ALM OFF/ALM ON/SNOOZE switch to ALM OFF.

Backlight and Dimmer Switch

1. The unit has a backlight that is always on. Plug the main unit into a wall outlet using the supplied adaptor.
2. To activate the automatic backlight while the unit is running on battery power, press the ALARM STOP/LIGHT button. The backlit LCD turns on for

LCD Features

The Weather Station with Atomic Clock can be set to many different modes. The LCD shown is the normal operating mode. The actual data shown will be different, based on your local settings and conditions.

• The configuration of your clock may differ somewhat from that shown in the illustration.
• AA or AAA size battery. This clock may use more than one piece of battery. Please refer to the engraved battery marks inside the battery compartment for the correct battery type.

Quick Start
Battery Installation
Clock/Main Unit

1. Plug the main unit into the wall outlet using the included 7.5V adaptor.
2. Insert 4 AAA batteries into the battery compartment on the bottom of the main unit, ensuring proper polarity as indicated. Batteries are for backup in case AC power goes out.
Note: When a low battery icon appears in the indoor temperature and humidity window on the LCD, replace the batteries.

Wireless Temperature/Humidity Transmitter

1. Remove the battery door
2. Insert 2 AA batteries
Note: When a low battery icon appears in the outdoor temperature and humidity window on the LCD, replace the batteries.

Wireless Rain Gauge Transmitter
(2 AA batteries installed)
Battery Replacement:

1. Detach the outer case of the rain gauge unit by rotating cover counter-clockwise ½".
2. Unscrew the battery door.
3. Insert 2 AA batteries.
4. Screw the battery door.
Note: When a low battery icon appears in the outdoor rain gauge window on the LCD, replace the batteries.

Battery Precautions

Do not mix old and new batteries.
Do not mix alkaline, standard (carbon-zinc) or

rechargeable (nickel-cadmium) batteries.

Warnings

• Do not expose the main unit to excessive force, shock, dust, extreme temperature, direct sunlight or humidity. Any of these conditions may shorten the life of the unit.
• Avoid exposing the wireless transmitter to extreme temperatures, water or severe shock.
• Avoid contact with any corrosive materials such as perfume, alcohol or cleaning agents.
• Do not tamper with any of the internal components of this clock. This will void the warranty and may cause damage.

Operation
Clock/Main Unit

To ensure proper functioning of your clock with indoor/outdoor temperature, humidity and rain gauge, please follow the below procedure:
1. Insert new batteries in the main unit first (see Battery Installation).
2. Insert batteries in the two remote units (Temperature/Humidity Transmitter and Rain Gauge Transmitter).
3. Do not touch any other buttons or settings on the clock. It will automatically receive the remote temperature/humidity, rain gauge data and indoor temperature/humidity.
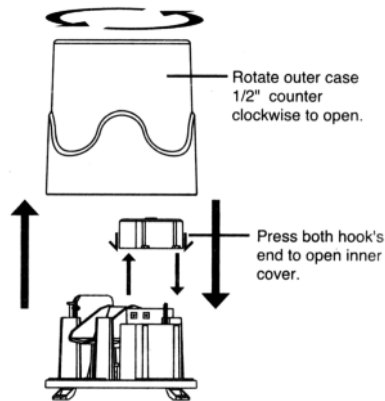
Remote Temperature/Humidity Transmitter

1. After installing the batteries (or pressing the RESET button), the temperature/humidity RF (radio frequency) signal is immediately sent to the clock. The clock attempts to receive the RF temperature/humidity signal for the first five minutes and refreshes the RF temperature every three minutes.
2. To select Fahrenheit or Celsius temperature units, press °C/°F button on the remote unit.
3. Press SELECT button to select temperature or humidity display. Press and hold SELECT button for two seconds until LCD shows (↻), temperature and humidity is displayed alternatively. To stop scrolling temperature and humidity display, press and hold SELECT button again for two seconds until (↻) disappears.
4. If the RF temperature/humidity signal is not received within five attempts, "---" appears in the outdoor temperature window of the clock. In this case, press the RE-SYNC button of the main unit, then press RESET button on the back of the transmitter. The clock then attempts outdoor/humidity.
5. If the clock does not display the outdoor temperature/humidity after six minutes, relocate the clock or the transmitter until reception is

successful.

Remote Rain Gauge Transmitter

1. Open the outer case of the rain gauge. (See diagram)

Rotate outer case 1/2" counter clockwise to open.

Press both hook's end to open inner cover.

2. Remove the tape from the bucket inside so it moves freely.
3. Batteries are already installed in the rain gauge. Remove the inner cover to access the RESET/RE-SYNC buttons. Pressing the RESET button, the rain gauge RF (radio frequency) signal is immediately sent to the clock. The rain gauge window on the main unit will display "**0**", showing the reception was successful.
4. If the rain gauge signal is not received within five attempts, "**---**" appears in the rain gauge window of the clock. In this case, press the RE-SYNC button of the main unit, then press RE-SYNC button at the back of the transmitter. The clock then attempts rainfall reception for another six minutes.
5. If the clock does not display the rain gauge data after six minutes, relocate the clock or the rain gauge until reception is successful.
6. Mount the rain gauge on a level surface (use metal ring to adjust the levelling of the rain gauge).
7. Close the outer case. The installation of the rain gauge is completed.

Synchronisation of Remote Units and Main Unit

1. After the batteries have been inserted in the main unit and in the remote transmitter unit, the LCD on the remote should show current temperature/humidity. In a few minutes, the remote temperature/humidity/rainfall are shown in the outside temperature/humidity/rainfall field on the main unit. If at least ten minutes pass and the outside temperature/humidity/rainfall field displays "**---**" instead of the remote unit's temperature/humidity/rainfall, see the "Transmission Troubleshooting" section. Be sure the main unit and transmitter units are in sync and the outdoor temperature/humidity/rainfall are displayed on the main unit.
2. After a few minutes, place the remote transmitter unit in the desired outdoor location within 100 feet maximum of the main unit. Place the main unit as close as possible to the outdoor remote unit. For best results, the remote unit should be placed within sight of the main unit, such as outside the closest window. If necessary, screw the included wall-mount bracket to a convenient outdoor location and place the transmitter unit inside the bracket. The remote/outdoor temperature/humidity/rainfall will be shown on the main unit. Obstacles, walls, etc. reduce the range significantly. The transmitter should be placed where it will not experience weather extremes, such as rain, snow, direct sunlight, etc. This allows you to receive an accurate outside temperature/humidity/rainfall reading and weather forecast. Note: For more details on synchronization, please refer to "Wireless Remote Temperature Transmission".

Weather Forecast

The local weather forecast and weather tendency are predicted using the rate of change in atmospheric pressure determined by a precisely calibrated pressure sensor. After turning the unit on for the first time, it takes 24 hours for the weather forecasting data to be calculated for the first time. After 24 hours, the unit calculates the weather for the next 6 hours. To ensure a reliable weather calculation, do not relocate the unit during operation. Weather tendency is indicated by an up or down forecast arrow.

1. The up arrow icon (FORECAST) indicates a significant increase in atmospheric pressure. This normally means the weather is going to improve.
2. The down arrow icon (FORECAST) indicates a significant decrease in atmospheric pressure. This means the weather is going to get worse.
3. The forecast icon (FORECAST) without an arrow indicates a steady/insignificant change of atmospheric pressure. This means the weather will remain unchanged.

Tendency - Up	Tendency - Down	Tendency - Steady
▲ FORECAST	FORECAST ▼	FORECAST

Weather Conditions

SUNNY	PARTLY CLOUDY	CLOUDY	RAINY	STORMY
☼	☁	☁	☂	☁

The current weather condition is displayed using one of five animated icons. Sunny, Partly Cloudy, Cloudy, Rainy or Stormy. The stormy icon only appears when a sudden and serious drop in atmospheric pressure is detected.

Barometric Graph

1. The barometric graph shows the previous day's pressure changes. The Time Axis shows the changes from the previous day, e.g. 4 = 4:00am, 8 = 8:00am, 12 = 12:00pm, 16 = 4:00pm, 20 = 8:00pm and 24 = 12:00am
2. The unit stores the pressure mean of the previous day from 12:00am to 11:59pm
3. The barometric graph shows the pressure difference between the pressure at the time (4:00am, 8:00am, 12:00pm, 4:00pm, 8:00pm and 12:00pm) and the mean pressure.
4. If the pressure difference exceeds ±6mb (millibars), then the barometric graph shows the ±6mb.
5. The barometric graph resets if there is a change to the time zone, Daylight Saving Time, or day setting (manual or radio controlled). The barometric graph resets if the clock setting (manual or radio controlled) deviation is larger than ± half an hour.

Barometer

1. Current: Shows the current Pressure Reading, refreshes every 4 seconds.
2. Daily Total: Press the HISTORY button and the average pressure of the last day will be displayed. This display is updated every day at 12:00am.
3. Weekly Total: Press the HISTORY button and the average pressure of the last week will be displayed. This display is updated every Sunday at 12:00am.
4. Monthly Total: Press the HISTORY button and the average pressure of the last month will be displayed. This display is updated 1st of each month at 12:00am.
5. Season Total: Press the HISTORY button and the average pressure of the last season (1st season: 1st Jan, 2nd season: 1st April, 3rd season: 1st July, 4th season: 1st October) will be displayed. This display is updated at the starting day of each season at 12:00am.

Seasons	Range
Season 1	January 1 through March 31
Season 2	April 1 through June 31
Season 3	July 1 through September 31
Season 4	October 1 through December 31

6. The Barometer is reset if the clock is set manually and day setting deviation is larger than ± half an hour.

Outdoor Rainfall

1. Current: Shows the current rainfall.
2. Daily Total: Press the HISTORY button and the average rainfall of the last day will be displayed. This display is updated every day at 12:00am.
3. Weekly Total: Press the HISTORY button and the average rainfall of the last week will be displayed. This display is updated every Sunday at 12:00am.
4. Monthly Total: Press the HISTORY button and the average rainfall of the last month will be displayed. This display is updated 1st of each month at 12:00am.
5. Season Total: Press the HISTORY button and the average rainfall of the last season (1st season: 1st Jan, 2nd season: 1st April, 3rd season: 1st July, 4th season: 1st October) will be displayed. This display is updated at the starting day of each season at 12:00am.
6. The Rain Gauge is reset if the clock is set manually and day setting deviation is larger than ± half an hour.

Barometer and Rainfall History

1. Pressing the HISTORY button to see the history of mean Barometer and total Rainfall for the current day, week, month and quarter (season). The display sequence is: (current) - daily - weekly - monthly - quarterly - (current)
2. Current Barometer and Rain rate will display after five seconds.
3. Press the CLEAR button when mean Barometer and total Rainfall are displayed to clear all data.

Units Setting

1. Barometer: press PRESSURE UNIT button, the unit can select units of mb, inHg, mmHg or hPa.
2. Rainfall: press RAINFALL UNIT button, the unit can select units of in/hr or mm/hr

Indoor and Outdoor/Remote Temperature/Humidity Readout

1. The indoor and outdoor temperatures can be displayed in either °F or °C. The main unit converts the temperature if the remote transmitter unit is set to a different temperature display. If the temperature and/or humidity exceeds or falls below the unit's range, the display shows either "HI" or "LO" in place of the temperature and/or humidity.
2. To display the recorded minimum and maximum indoor and outdoor temperatures/humidity in succession, press the MAX/MIN button on the main unit repeatedly. The temperature/humidity display returns to the current temperature after five seconds or after pressing the MAX/MIN button three times. To clear the maximum and minimum temperature/humidity data, press the CLEAR button whilst the maximum and minimum